

Work Order ID 75066

75066

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October-17-11 10:46:47 AM

Item ID: D6103-003 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Round Billet, Aluminum
 Start Date: 17/10/2011 Start Qty: 24.00 ***24*** Cust Item ID:
 Required Date: 28/10/2011 Req'd Qty: 24.00 ***24*** Customer:
 Reference:

Approvals: Process Plan: M.L.J Date: 11/10/17 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6103	Rev B								

100 PURCHASING 0.00
100
 Purchasing Memo 0.00
 Purchasing Issue P/O: 15180 a) Description: Alluminum round billet b)
 Ø3.500" x 12.500" (long) Tolerance on all dimensions are +0.030"/-0.000"
 d) Material: 7075-T7351 (QQ-A-225/9) Material certification required
metana casted 45.0

11/10-17 (24)

110 Receive & Inspect for Damage & Mat'l Certs 0.00
110
 Packaging Memo 0.00
 Packaging Ensure material certification is attached

11/14/25 (24)

120 QC6- Inspect dimensions to drawing 0.00
120
 QC Memo 0.00
 Quality Control

11/10/24 25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <i>MAH47</i>	0.00							
130									
Packaging	Memo	0.00		<i>on 11/10/24</i>		<i>25</i>	<i>0</i>		
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							<i>11/10/26 JG</i>
140									
QC	Memo	0.00							
Quality Control									<i>MF 11-10-25</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

October-17-11 10:46:51 AM

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Work Order ID: 75066

75066

Parent Item: D6103-003

D6103-003

Parent Item Name: Round Billet, Aluminum

Start Date: 17/10/2011

Required Date: 28/10/2011

Start Qty: 24.00

Required Qty: 24.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6103-003P

Purchased

No

110

Each

2.0000

1

24

D6103-003P

round alum billet

**

Handwritten signature and date 28/10/11

Location

Loc Qty

Loc Code

MAT043

2

71884

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

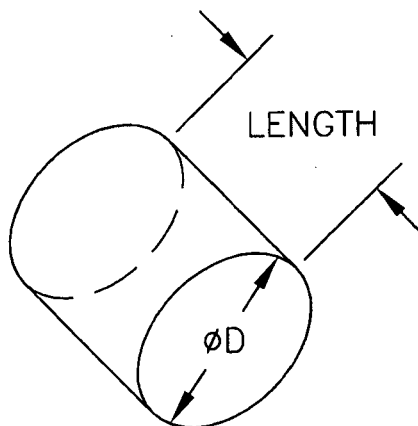
NOTE: Date & initial all entries



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 75066

PH-10-17

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:1034473

Ship From: A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 24-OCT-2011	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 1034473-2	

Shipment Details				Final Destination Branch - MON			
Order No 1776166	Line No 1	Item No 8808.MO	Description 3.5000..RD.7075.T7351.ALUMINUM.CF.144.0000 CUT TO 12.5 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: QQ-A-225/9				
Purchase Order No 15180		Part Number YOUR ITEM NUMBER: D6103-003		Ordered Qty 24.00 PCS		Invoice Qty 24 PCS	
Details							
Delivery No. 100577336	Mill	Heat Number MA011004085	Mech Id	PCS 24	Width (IN)	Length (IN)	Shipped Qty(LBS) 291.01

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

Certified Inspection Report

05/25/11
09:30:29

Alcoa Inc.
Massena Operations
Park Avenue East, Massena, NY 13662



Customer
Castle A M & Co

Customer P.O. No.
109532

Customer Part No.
(8808)

Alcoa Order No.
MMC-97150- -002

Govt. Contract No.

Ship To **A. M. Castle & Company**
3400 North Wolf Road
Bay #7
Franklin Park, IL 60131

We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and have the mechanical properties shown on the face of this sheet. Manufactured under an ISO/9000 registered quality management system.
Melted and manufactured in the USA.

Thomas J. Klemp, Quality Assurance Manager

Thomas J. Klemp

Date Shipped **05/25/11**

Weight Shipped **10,104 lbs**

Alloy - Temper **7075-T7351**

Size **3.50000 IN**

Product **CFRB-CF ROD Specific Length**

BOL **000159457**

Shape **DIA** Config **12 FT**

QRR

Specifications:

A97075-11 Rev 10 w/exc & comments per T
Klemp email dtd 1/5/10
Material conforms to T73 requirements
Minimum mechanical properties to apply:
68 KSI Tensile Strength
56 KSI Yield Strength
10% Elongation
AMS 4124D (Except Size)
QQA-225/9E (Except Size)
ASTM B211-03 (Except Size)
AMS-QQA-225/9 (Except Size)

Product produced and marked to the requirements of AMS-QQ-A-225/9 also meets the requirements of QQ-A-225/9.
Product produced and marked to the requirements of QQ-A-225/9 also meets the requirements of AMS-QQ-A-225/9.

TEST REQUIREMENTS		Test	Test	Test	Test	Test	Test	Test	Test	Test
		U.T.S.	T.Y.S.	%Elong	Cond					
Max:			67.9							
Min:		68.0	56.0	10.0	38.0					

Test Results		Test	Test	Test	Test	Test	Test	Test	Test	Test
		U.T.S.	T.Y.S.	%Elong	Cond					
Lot / Work Order	No. of Tests									
MA011003332	1	Max: 72.3	61.2	15.0	41.1					
		Min: 72.3	61.2	15.0	41.1					
MA011003333	1	Max: 71.0	59.4	15.0	41.4					
		Min: 71.0	59.4	15.0	41.4					
MA011004085	1	Max: 72.3	61.0	15.0	40.9					
		Min: 72.3	61.0	15.0	40.9					

TEST ABBREVIATIONS

U.T.S. Ultimate Tensile Strength KSI
Cond Conductivity % IACS

T.Y.S. Tensile Yield Strength KSI

%Elong Elongation % in 2"

Aluminum Association Chemical Composition Limits (in Weight %)

ALLOY		%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%Others	%Others	%AL			
7075	MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	Rem			
	MIN			1.2		2.1	0.18	5.1		Each	Total				

Certified Inspection Report

05/25/11
09:30:29

Alcoa Inc.
Massena Operations
Park Avenue East, Massena, NY 13662



Customer
Castle A M & Co

Customer P.O. No.
109532

Customer Part No.
(8808)

Alcoa Order No.
MMC-97150- -002

Govt. Contract No.

Actual Started Chemistry

LOT/WORK ORDER		%SI	%FE	%CU	%MN	%MG	%CR	%ZN	%TI	%OE	%OT	%AL			
MA011003332	MAX	0.08	0.15	1.6	0.02	2.5	0.20	5.7	0.02	LT 0.05	LT 0.15	Rem			
	MIN	0.06	0.12	1.4	0.01	2.3	0.20	5.5	0.02						
MA011003333	MAX	0.08	0.12	1.6	0.02	2.5	0.20	5.7	0.02	LT 0.05	LT 0.15	Rem			
	MIN	0.07	0.12	1.4	0.02	2.3	0.20	5.5	0.02						
MA011004085	MAX	0.08	0.15	1.6	0.02	2.5	0.20	5.7	0.02	LT 0.05	LT 0.15	Rem			
	MIN	0.06	0.12	1.4	0.01	2.3	0.20	5.5	0.02						

NOTES:

Mercury is not a normal contaminant in aluminum alloys and neither it nor any of its compounds are used in the manufacture of our product.
This alloy meets the requirements of EU 2002/95/EC (RoHS) and EU 2000/53/EC for lead, mercury, cadmium and hexavalent chromium.

Castle Metals FP

HEAT NUMBER MA011004085
MECHANICAL ID _____
ITEM CODE 8808
LOT NUMBER _____
PO NUMBER 109532
RECEIPT DATE 5-31-2011
SUPPLIER ALCOA
SPECIFICATION _____
LCS NO
COMMENT _____
APPROVED [Signature]